

Emerging Preclinical and Clinical Applications of Theranostics for Nononcological Disorders



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KEYWORDS

• Theranostics • Nononcological diseases • Infection • Inflammation • Sarcoidosis
• Rheumatoid diseases

KEY POINTS

- Along with the considerable results of theranostics in tumoral tissues, there has been a strong push to use this approach for nononcological diseases as well.
- Theranostics approaches may have efficient role in management of rheumatic and cardiovascular diseases, as well as the infections including viral, bacterial and fungal.
- There is an emerging need for randomized trials to specify the factors affecting validity and efficacy of theranostic approaches in nononcological diseases.

INTRODUCTION

Studies in nuclear medicine have shed light on molecular imaging and therapeutic approaches for oncological and nononcological conditions. Theranostic approaches using the same radiopharmaceuticals for the diagnoses and subsequent therapeutics of malignancies have continuously evolved for site-directed molecular imaging and therapy, especially in oncology. Theranostics, one

of the remarkable consequences of the Human Genome Project, has added considerable value to personalized medicine as diagnostic and therapeutic methods are performed exclusively per personal genotypes and phenotypes. Molecular pathways and high-throughput omics platforms are used to recognize and extend small molecular probes for these conditions. Theranostic approach, however, has long been used in clinical practice, namely in

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